5(3)

AUTHORS: Petrov, A. D., Zakharov, Ye. P.

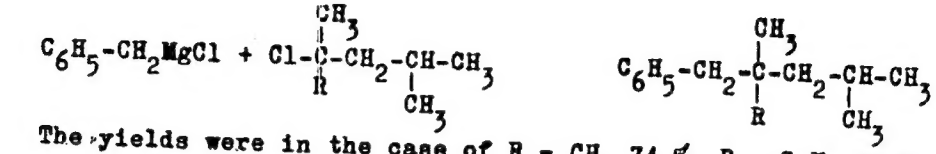
SOV/153-2-3-14/29

TITLE: Synthesis of Alkyl Benzenes by the Grignard-Wurtz Reaction With Hydrocarbons as Solvents Instead of Ether

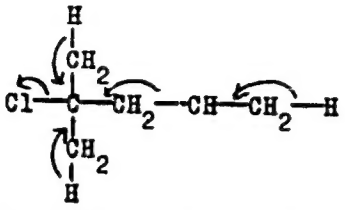
PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1959, Vol 2, Nr 3, pp 384-389 (USSR)

ABSTRACT: The authors investigated the effect of the solvent on the hydrocarbon yield in organomagnesium syntheses. In the reaction of tertiary chlorides with RMgX the ether, as nucleophilic solvent, inhibits the formation of a transition complex by blocking the access to mgnesium atom. Moreover, a nucleophilic solvent renders the separation of hydrochloride from the tertiary chloride much easier since in the formation of the activated complex an oxonium compound of ether forms with the $\beta$-hydrogen atom of the tertiary chloride. As a result always a considerable portion of the corresponding olefin may be found in the reaction products. The use of more strongly basic solvents instead of ether is bound in this case to lead to higher yields in the desired products. Thus the use of n-heptane as solvent in the reaction of benzyl magnesium chloride with some tertiary chlorides leads to the formation of alkyl benzenes ($C_{14}$ to $C_{20}$)

with high yields:



The yields were in the case of R = $CH_3$ 74 %, R = $C_2H_5$ 45 %, R = n-$C_3H_7$ 63 %, R = n-$C_4H_9$ 34 %, R = n-$C_5H_{11}$ 48 %, R = n-$C_6H_{13}$ 41 %, and R = n-$C_7H_{15}$ 46 %. In this connection ether was not completely substituted since the equimolar amount of ether remained bound in a complex way to benzyl magnesium chloride and was released only in the course of the reaction with tertiary chloride. The authors explain the increase in the yields by the occurrence of an inductive effect in the tertiary chloride which leads to a conjugate system in the molecule:



Freydlin, Nogin, and Nesmeyanov pointed to a similar interaction in the chlorocarbonic acid molecule (Ref 6). In an experimental part the course of the seven syntheses is exactly described. One of the syntheses was made by T. L. Krasnova. The physical constants of the products obtained are given. They were computed according to the method by Tatevskiy (Ref 12). Table 1 shows the properties of the synthesized alkyl benzenes. The alkyl benzenes obtained were hydrogenated to the corresponding alkyl cyclohexanes and their properties were investigated. Table 2 gives the properties of these alkyl cyclohexanes. The solidification temperatures were determined according to GOST 1533-42. The determination of the heats of combustion were made in the NII imeni Baranov by combustion in the

Synthesis of Alkyl Benzenes by the Grignard-Wurtz Reaction With Hydrocarbons as Solvents Instead of Ether SOV/153-2-3-14/29

calorimetric bomb according to GOST 5080-55. There are 1 figure, 2 tables, and 12 references, 6 of which are Soviet.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut imeni D. I. Mendeleyeva - Kafedra tekhnologii gaza i zhidkogo topliva (Moscow Institute of Chemical Technology imeni D. I. Mendeleyev - Chair for the Technology of Gas and Liquid Fuels)

SUBMITTED: May 12, 1958

Card 4/4

ZAKHAROV, Ye. P.: Master Chem Sci (diss) -- "Metallorganic synthesis of alkyl benzenes from $C_{14}$ to $C_{22}$". Moscow, 1958. 11 pp (Min Higher Educ USSR, Moscow Order of Lenin Chemicotechnological Inst im D. I. Mendeleyev), 150 copies (KL, No 3, 1959, 108)

PETROV, A.D.; ZAKHAROV, Ye.P.; KRASNOVA, T.L.

Synthesis of alkybenzenes of $C_{14}$ - $C_{20}$ composition by the Grignard -Wurtz reaction in an etherless medium. Zhur.ob.khim. 29 no.1:49-55 Ja '59. (MIRA 12:4)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni D.I. Mendeleyeva. (Benzene)
(Chemistry, Organic--Synthesis)

AUTHORS: Petrov, A. D., Zakharov, Ye. P., Krasnova, T. L. SOV/79-29-1-11/74

TITLE: Synthesis of Alkyl Benzenes of the Composition $C_{14}$-$C_{20}$ in the Grignard- Wuertz Reaction in Ether-Free Medium (Sintez alkilbenzolov sostava $C_{14}$-$C_{20}$ po reaktsii Grin'yara-Vyurtsa v bezefirnoy srede)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 1, pp 49-55 (USSR)

ABSTRACT: In the previous paper (Ref 1) the authors had found that reactions of some magnesium aryl halides with tertiary alkyl chlorides in n-heptane in the Grignard-Wuertz reaction at 30-33° permits a considerable increase of the yield in alkyl benzenes as compared to the same reaction in ether. This is the way they chose for several reactions of magnesium benzyl chloride with ramified tertiary chlorides and for the synthesis of eight new alkyl benzenes (formulae I-VIII). The relatively high yields give evidence of the fact that the side reaction, the dehydrochlorination of the ramified tertiary chloride which usually takes place in connection with the Grignard-Wuertz reaction and which decreases the yield in the normal condensation product, is suppressed in this case. In the case of condensation

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Synthesis of Alkyl Benzenes of the Composition $C_{14}$-$C_{20}$ in the Grignard-Wuertz Reaction in Ether-Free Medium

SOV/79-29-1-11/74

with magnesium benzyl chloride among 8 chlorides 7 were used, according to the structure formula

$$CH_3-\underset{CH_3}{CH}-CH_2-\underset{R}{\overset{CH_3}{C}}Cl \quad (IX),$$

where R = $CH_3$, $C_2H_5$, iso-$C_3H_7$, n.-$C_3H_7$, iso-$C_4H_9$, n.-$C_4H_9$, $CH_2C_6H_5$. The results obtained lead to a few conclusions concerning the dependence of the yields on the structure of the initial products. The hydrocarbon yield in this reaction depends to a considerable extent upon the presence or absence of the $\sigma,\sigma$-conjugation of the C-Cl and C-H bindings in the molecule of the initial alkyl halide, in which connection the structure of the radical is of decisive importance. Thus, the substitution of ether in the above reaction by a hydrocarbon solvent is of importance in the second stage of reaction. The constants of the synthesized alkyl benzenes are given by table 1. There are 2 tables and 18 references, 5 of which are Soviet.

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SOV/79-29-1-11/74

Synthesis of Alkyl Benzenes of the Composition $C_{14}$-$C_{20}$ in the Grignard-Wuertz Reaction in Ether-Free Medium

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut imeni D. I. Mendeleyeva (Moscow Chemotechnological Institute imeni D. I. Mendeleyev)

SUBMITTED: December 26, 1957

Card 3/3

ZAKHAROV, Ye. P.

79-2-42/58

AUTHORS: Petrov, A. D.; Sushchinskiy, V. L.; Zakharov, Ye. P.; Rogozhnikova, T. I.

TITLE: Synthesis of Branched Aliphatic Hydrocarbons of the $C_{10}$ - $C_{15}$ Composition by the Grignard and Grignard-Wuertz Reactions (Sintez razvetvlennykh alifaticheskikh uglevodorodov sostava $C_{10}$ - $C_{15}$ po reaktsiyam Grin'yara i Grin'yara-Vyurtsa)

PERIODICAL: Zhurnal Obshchey Khimii, 1957, vol. 27, No 2, pp. 467-475 (U.S.S.R.)

ABSTRACT: It was established experimentally that allyl halides even with highly branched ketones react normally. This fact makes this reaction suitable for the derivation of branched hydrocarbons having one or two quaternary carbon atoms. It is shown that Mg-halide isobutenyl reacts even with highly branched ketones resulting in the formation of homologous tertiary alcohols. The condensation of saturated tertiary alkyl fluorides was realized and by the Yavorskiy method using allyl halides. The fluorides compared with chlorides of analogous structure gave 300% more hydrocarbon yields. It is shown that the hydrocarbon yields (hydrocarbons synthesized by the Grignard-Wuertz method) increase by the introduction into the alkyl

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Snythesis of Branched Aliphatic Hydrocarbons of the $C_{10}$ - $C_{15}$ Composition by the Grignard and Grignard-Wuertz Reactions

halides a multiple bond in beta-position relative to the halide-carbon bond (in the case of sigma,pi - conjugation) as well as in the case of sigma, sigma-conjugation.

The higher yields in the case of fluorides are explained mainly by their greater activity because the energy of the C-F bond is 102 cal whereas the energy of the C-Cl bond is only 78 cal.

There are 19 references, of which 9 are Slavic

ASSOCIATION: Moscow Chemical-Technological Institute imeni D. I. Mendeleyev

PRESENTED BY:

SUBMITTED: March 9, 1956

AVAILABLE: Library of Congress

ZAKHAROV, Ye. P.

79-11-16/56

AUTHORS: Petrov, A. D. , Zakharov, Ye. P.

TITLE: The Synthesis of Some Alkylbenzenes and Alkylcyclohexanes of the Formula $C_{14}$-$C_{15}$ (Sintez nekotorykh alkilbenzolov i alkiltsiklogeksanov sostava $C_{14}$-$C_{15}$)

PERIODICAL: Zhurnal Obshchey Khimii, 1957, Vol. 27, Nr 11, pp.2990-2993 (USSR)

ABSTRACT: In the synthesis hitherto made of alkylbenzenes with a branched paraffin-chain in the presence of aluminum-chloride chiefly tertiary alcohols or haloid alkyls were used for alkylation, but only low-molecular alcohols gave good yields. When , e.g.,in the alkylation of benzene with tertiary butyl alcohol the yield amounted to 70 % , on transition to dimethylisobutylcarbinol and dimethyl-tert.-butylcarbinol it sank to 38 and 7 %. Besides there exists the absolute danger that upon increase in the molecular weight of the tertiary alcohols the purity of the hydrocarbons as final products becomes problematic in view of the high isomerizing quality of aluminum-chloride. The first performed synthesis of the alkylbenzenes by condensation of bromobenzene with tertiary chloralkyls according to Würtz-Fittig only led to diphenyl- and olefinic hydrogens. Then the method by Würtz-Grignard was used for a synthesis of the alkylbenzenes. Thus Buu-Hois and P. Cagniant in this manner

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79-11-16/56

The Synthesis of Some Alkylbenzenes and Alkylcyclohexanes of the Formula $C_{14}$-$C_{15}$

performed the condensation of tertiary chlorobutyl with Grignard's reagent and obtained 1,3-dimethyl-4-bromobenzene with a 17 % yield. According to the same scheme the authors in ethyl ether and heptane (see table I) obtained five hitherto unknown alkylbenzenes which by the hydrogenation in the autoclave at a temperature of 180-200°C over nickel were converted to the corresponding alkyl cyclohexanes. Otherwise the condensation of the tertiary haloid alkyls with bromobenzene and its homologues according to Würtz-Grignard gives a better yield of alkyl benzenes. There are 2 tables, and 10 references, 5 of which are Slavic.

ASSOCIATION: Moscow Chemico-Technological Institute
(Moskovskiy khimiko - tekhnologicheskiy institut)

SUBMITTED: November 1, 1957

AVAILABLE: Library of Congress

1. Alkylbenzenes-Synthesis 2. Alkylcyclohexanes-Synthesis

Card 2/2

PETROV, A.D.; ZAKHAROV, Ye. P.

Reactivity of some tertiary chlorides and their derivatives in the Grignard reaction. Izv. vys.ucheb. zav.; khim.i khim.tekh.3 no.2:301-304 '60. (MIRA 14:6)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni D. I. Mendeleyeva, kafedra tekhnolgoii neftekhimicheskogo sinteza.
(Grignard reagents)
(Chlorides)

PETROV, A.D.; ZAKHAROV, Ye.P.; ZADOROZHNYY, N.A.; PONOMARENKO, V.A.

Synthesis of organosilicon monomers with nitrile groups. Zhur. prikl.khim. 35 no.2:385-389 F '62. (MIRA 15:2)
(Silicon organic compounds) (Nitriles)

FAL'KOVSKIY, S.V., inzh.; ZAKHAROV, Ye.S., inzh.; VIGAK, V.M., inzh.; YASKILKO, N.B., inzh.; BULYGIN, Yu.G., inzh.; PASICHNIK, I.I., inzh.

Using strain gauges for a full scale investigation of the steam pipes of the 200 Mw unit. Teploenergetika 9 no.1:32-36 Ja '62. (MIRA 14:12)

1. Yuzhnoye otdeleniye Gosudarstvennogo tresta po organizatsii i ratsionalizatsii elektrostantsiy.
(Steam pipes—Testing)
(Boilers)

S/096/63/000/001/006/006
E194/E155

AUTHORS: Zakharov, Ye.S., Engineer; Vigak, V.M., Engineer; Baryshnikov, A.P., Engineer; and Zamora, T.P., Engineer.

TITLE: The measurement of stress at high temperature by means of self-compensating wire strain gauges

PERIODICAL: Teploenergetika, no.1, 1963, 68-70

TEXT: In making strain gauge measurements at high and possibly varying temperatures, the main gauge is usually glued to the part and a compensating gauge, which allows for changes in gauge wire resistance with temperature, is usually fixed to an unstrained lamina of the same material as the part under stress. This is not entirely satisfactory because, amongst other things, the two gauges do not receive the same heat treatment. In one particular case of measurements at 300 °C there were errors of up to 8 kg/mm2. A new procedure uses four strain gauges set at angles of 45° to one another, alternate gauges being connected back-to-back for temperature compensation. Two further gauges are at right angles to one another on a lamina of the material under test which

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is fixed to the test part at its two ends so that strain in it is unidirectional. Formulae can then be derived for the principal stresses in the part under test. If it is known that the position investigated is only in tension, or if the part is flat, three pairs of strain gauges each mounted on a lamina fixed to the part at the two ends may be used to determine the principal stresses. This has the advantage that all the gauges can be fixed to the lamina under laboratory conditions so that correct heat treatment is ensured. The procedure was checked by making bending tests on a steel beam at various temperatures between 20 and 300 °C, and gave fair agreement between the known stress and the indications of the gauges. The error is attributed to increased stiffness of the metal where the strain gauge laminae were attached, and would not arise in large components. The tests showed that the strain-gauge lamina operated satisfactorily both in tension and compression on a flat part. Accordingly, there is no need to fix gauges directly to parts which are either flat or convex in tension. In other cases four strain gauges are fixed to the part at 45° to one another, together with a lamina with two gauges, in order to

determine the principal stresses. Application of the method to stress determination in the flanges of a steam turbine is described.
There are 3 figures.

ASSOCIATION: Yuzhnoye otdeleniye ORGRES
(Southern Division of ORGRES)

✓

ZAKHAROV, Ye.G.; FAL'KOVSKIY, S.V.; VIGANK, V.M.; RATNER, A.V., kand. tekhn. nauk, red.

[Experience in the installation and adjustment of steam-pipes in blocks with 150 and 200 Mw. ratings] Iz opyta montazha i naladki paroprovodov blokov moshchnost'iu 150 i 200 Mvt. Moskva, Biuro tekhn. informatsii, 1964. 36 p. (MIRA 18:5)

ZAKHAROV, Ye.S., inzh.; VIGAK, V.M., inzh.; BARYSHNIKOV, A.P., inzh.; ZAMORA, T.P., inzh.

Measurement of stresses at high temperatures using self-compensating wire-type resistance gauges. Teploenergetika 10 no.1:68-70 Ja '63. (MIRA 16:1)

1. Yuzhnoye otdeleniye Gosudarstvennogo tresta po organizatsii i ratsionalizatsii rayonnykh elektrostantsiy i setey.
(Strain gauges)
(Strains and stresses—Measurement)

ACC NR: AT6035244 SOURCE CODE: UR/3043/66/000/005/0187/0196

AUTHOR: Dmitriyev, V. I.; Zakharov, Ye. V.

ORG: none

TITLE: Diffraction of a plane electromagnetic field on an ideally conducting half-plane immersed in a uniform half-space

SOURCE: Moscow. Universitet. Vychislitel'nyy tsentr. Sbornik rabot, no. 5, 1966. Vychislitel'nyye metody i programmirovaniye (Computing methods and programming), 187-196

TOPIC TAGS: electromagnetic field, diffraction, ideal conductor, mathematic analysis

ABSTRACT: A rigorous solution of the problem on an ideally conducting half-plane located vertically in a uniformly conducting half space has been given. It has also been shown that the solution of the problem reduces to solving a certain integral equation a half-line with a nucleus depending on the difference of the arguments and their sum. A method of finding the analytical form of solving this equation has been proposed. The present article examines the general statement of the problem of diffraction of a plane electromagnetic field in an ideally conducting half-plane situated at an angle to the vertical in a homogeneous conducting half-space. The problem also reduces to solving an integral equation on the half-line, but with a nucleus of more complex aspect. Known methods are used to solve this integral equation and the paper computes the accuracy of the solution in relation to the angle of incline of the

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ACC NR: AT6035244

half-plane and its depth. A two-layered medium is prescribed. When $z > 0$ the air has wave number $k_0$; when $z < 0$ there is a uniform space (conducting) with a wave number of k. In the conducting medium, disregarding the displacement currents, there is the wave number $k = (1 + i)k$; time dependence is $e^{-i\omega t}$. At depth h in the conducting half-space is located an ideally conducting half-plane at angle $\alpha$ to the vertical. The primary field does not depend on coordinate x, hence the whole field is likewise independent of x, and consists of the sum of fields of two types, the electric and the magnetic. The problem involves boundary conditions which are solved by functions of components of these two fields; it is simplified by selecting a rectangular system of coordinates and solved in the form of potentials of the simple and dual layers. Orig. art. has: 14 formulas and 1 figure.

SUB CODE: 12, 20/ SUBM DATE: none/ ORIG REF: 002

Card 2/2

KOLBASOV, V.I.; BARDENSHTEYN, S.B.; DZHAGATSPANYAN, R.V.; ZAKHAROV, Ye.V.

Quantitative analysis of technical m-chloronitrobenzene by infrared absorption spectra. Zav.lab. 28 no.11:1326-1327 '62. (MIRA 15:11)

(Nitrobenzene--Spectra)

MEL'NIKOV, N.N.; ZETKIN, V.I.; LIBMAN, B.Ya.; SOKOLOVA, Ye.M.; ZAKHAROV, Ye.V.; PARFENOV, A.I.; TRUNOV, P.P.; GOLYSHIN, N.M.

Organic fungicides as substitutes for copper-containing preparations. Khim. prom. no.10:28-30 O '61. (MIRA 15:2)
(Fungicides)

ZAKHAROV, Ye.V.; MASHKOV, I.V.

Accurate calculation of the holding capacity of gas traps and pools. Geol. nefti i gaza 5 no.4:34-38 Ap '61. (MIRA 14:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologo-razvedochnyy neftyanoy institut.
(Gas, Natural—Geology)

BURSHTAR, Mikhail Semuilovich. Prinimali uchastiye: ZAKHAROV, Ye.V., geolog; KAMENETSKIY, A.Ye., geolog. KHAIN, V.Ye., prof., doktor geologo-mineral.nauk, red.; DOLMATOV, P.S., vedushchiy red.; FRUMKIN, P.S., tekhn.red.

[Geology, and oil and gas potentials of platform provinces in Ciscaucasia and the Crimea] Geologiia i neftegazonosnost' platformennykh oblastei Predkavkaz'ia i Kryma. Pod red. V.E. Khaina. Leningrad, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, Leningr.otd-nie, 1960. 214 p.
(MIRA 13:11)

(Crimea--Petroleum geology) (Crimea--Gas, Natural--Geology)
(Caucasus, Northern--Petroleum geology)
(Caucasus, Northern--Gas, Natural--Geology)

ZETKIN, V.I.; DZHAGATSPANYAN, R.V.; ZAKHAROV, Ye.V.

Chlorination of nitrobenzene. Zhur. prikl. khim. 38 no. 10: 2379-2383 O '65. (MIRA 18:12)

1. Submitted July 19, 1963.

ACC NR: AP6036360 SOURCE CODE: UR/0387/66/000/011/0083/0099

AUTHOR: Zakharov, Ye. V.; Dmitriyev, V. I.

ORG: Mechanics and Mathematics Department, Moscow State University (Mekhaniko-matematicheskiy fakul'tet, Moskovskiy gosudarstvennyy universitet)

TITLE: Diffraction of electromagnetic waves on an ideally conducting half plane in a layered medium

SOURCE: AN SSSR. Izvestiya. Fizika Zemli, no. 11, 1966, 83-99

TOPIC TAGS: electromagnetic wave diffraction, wave diffraction, conducting half-plane problem, half plane, diffraction problem, approximate solution, integral equation

ABSTRACT: The diffraction of an electromagnetic field from an arbitrary point source on an ideally conducting half plane located in a layered medium is solved by the method proposed by V. I. Dmitriyev [Sb. rabot Vychislitel'nogo tsentra, no. 5, 1966]. In the general case of the problem is reduced to the system of two Fredholm integral equations of the 2nd kind. It is shown that in the quasi-stationary case the method of successive approximations is applicable to this system. Thus, the approximate solution of the problem, which is limited by the first approximation of the solution of the integral equation system, can be written in a fairly simple analytical form. Orig. art. has: 29 formulas and 4 figures.

SUB CODE: 08/ SUBM DATE: 12May66/ ORIG REF: 007/ OTH REF: 005/ ATD PRESS:5106
UDC: 534.26.550.834

Card 1/1

L 36444-66 EWP(j)/EWT(m) RM/JW
ACC NR: AP6018073 (A) SOURCE CODE: UR/0?6/66/040/005/1121/1125

AUTHOR: Zetkin, V. I.; Panchenkov, G. M.; Kolesnikov, I. M.; Zakharov, Ye. V.; 27
Kupriyanov, I. I. B

ORG: Moscow Institute of the Petrochemical and Gas Industry im. I. M. Gubkin (Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti)

TITLE: Reactivity of nitrobenzene and its chlorine derivatives. 1. Investigation of high temperature destructive chlorination

SOURCE: Zhurnal fizicheskoy khimii, v. 40, no. 5, 1966, 1121-1125

TOPIC TAGS: nitrobenzene, nitrogen compound, chlorinated aromatic compound, chlorinated organic compound

ABSTRACT: Destructive chlorination of nitrobenzene, and ortho-, para-, and metha-chloronitrobenzenes was studied in the 403°-673°K range in the presence and absence of activated carbon. Glass ampoules containing nitrocompounds with chlorine and carbon were charged at liquid nitrogen temperature, evacuated, and sealed. Subsequently, the ampoules were heated in thermostats for 30 minutes at reaction

Card 1/2 UDC: 541.128

L 36444-66
ACC NR: AP6018073

temperature and cooled to room temperature whereupon the contents were analyzed. In the presence of activated carbon, the rate of destructive chlorination was found to be greater than in the absence of activated carbon. The lower the nitrobenzene to chlorine ratio, the greater was the rate of destructive chlorination. The reactivity of various chloronitrobenzenes was found to decrease in order ortho>para>metha. Orig. art. has: 7 figures.

SUB CODE: 07/ SUBM DATE: 13May65/ ORIG REF: 006/ OTH REF: 007

Card 2/2

ZAKHAROV, Ye.V.

Establishing a basis for determining optimal depths for extimating hypothetical reserves. Neftegaz. geol. i geofiz. no. 12:47-51 '63. (MIRA 17:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy neftyanoy institut, Moskva.

L 53028-65 EWT(d) IJP(c)

ACCESSION NR: AT5010213 UR/3043/65/000/003/0317/0328

18
17
16
B+1

AUTHOR: Dmitriyev, V. I.; Zakharov, Ye. V.

TITLE: Solution of a certain class of integral equations on a semi-infinite straight line

SOURCE: Moscow. Universitet. Vychislitel'nyy tsentr. Sbornik rabot, no. 3, 1965. Vychislitel'nyye metody i programmirovaniye (Computing methods and programming), 317-328

TOPIC TAGS: integral equation, Winer Hopf equation, electromagnetic wave propagation, electromagnetic diffraction, stratified medium, approximate solution

ABSTRACT: The authors consider an integral equation of the form

$$\varphi(t) - \int_0^\infty \{k(t-s) + p(t,s)\}\varphi(s)\,ds = f(t).$$

which differs from the standard Wiener-Hopf equation

Card 1/2

L 53028-65

ACCESSION NR: AT5010213

$$\varphi(t) - \int_0^{\infty} K(t-s)\,\varphi(s)\,ds = f(t). \qquad (A)$$

in that the kernel contains the bounded and continuous additional function p(t, s). Equations of the type considered here are encountered in the solution of problems of diffraction in stratified media. A proof for the existence and uniqueness of the solution of Eq. (B), based on the proof presented by M. G. Kreyn (Uspekhi matem. nauk XIII, no. 5, 1958) for the solution of Eq. (A), is first presented. A particular case of Eq. (B), dealing with the diffraction of the electromagnetic waves by a conducting plate imbedded in a conducting half-space, is then evaluated as a particular example. The solution is obtained by successive approximations, the accuracy of which is briefly discussed. Orig. art. has: 2 figures and 39 formulas.

ASSOCIATION: Vychislitel'nyy tsentr Moskovskogo universiteta (Computation Center, Moscow University)

SUBMITTED: 00 ENCL: 00 SUB CODE: MA, EM

NR REF SOV: 004 OTHER: 004

Card 2/2 BAB

ZAKHAROV, Ye.V.; MORDVIN, N.I.

Geological and economic evaluation of the basic results of prospecting operations for oil in the countries of the Middle East. Neftegaz. geol. o geofiz. no.8:58-64 '63. (MIRA 17:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy neftyanoy institut, Moskva.

BUYALOV, N.I.; ZAKHAROV, Ye.V.

Basic characteristics of the relief of the present-day surface of the basement of the U.S.S.R. in relation to an evaluation of the prospects for finding oil and gas. Sov. geol. 7 no.4:24-39 Ap'64. (MIRA 17:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy neftyanoy institut.

BUYALOV, N.I.; ZAKHAROV, Ye.V.

Using the volumetric method to estimate the expected oil reserves. Gool. nefti i gaza 8 no.7:12-14 Jl '64. (MIRA 17:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy neftyanoy institut, Moskva.

ZETKIN, V.I.; ZAKHAROV, Ye.V.; KOLESNIKOV, I.M.; PANCHENKOV, G.M.

Destructive high-temperature chlorination of nitrobenzene and some of the its derivatives. Zhur. fiz. khim. 39 no.5:1240-1242 My '65. (MIRA 18:8)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti imeni I.M. Gubkina.

BUYALOV, N.I.; ZAKHAROV, Ye.V.

Structure of the present-day surface of the basement of the U.S.S.R. in connection with the isolation and hypothetical evaluation of oil- and gas-bearing basins. Dokl. AN SSSR 9 no.1:42-43 Ja '65.
(MIRA 18:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy neftyanoy geologorazvedochnyy institut.

ZETKIN, V.I.; PANCHENKOV, G.M.; ZAKHAROV, Ye.V.; KOLESNIKOV, I.M.; DZHAGATSPANYAN, R.V.

Chlorination and sulfochlorination of organic compounds in apparatus with periodical and continuous action. Khim. prom. 41 no.10:733-734 O '65. (MIRA 18:11)

BUYALOV, N.I.; ZAKHAROV, Ye.V.

More exact representation of the method recommended for evaluating possible oil and gas reserves of the subgroup $D_1$. Neftegaz. geol. i geofiz. no.11:25-28 '65. (MIRA 18:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy neftyanoy institut.

ZAKHAROV, E. E. jt. au.

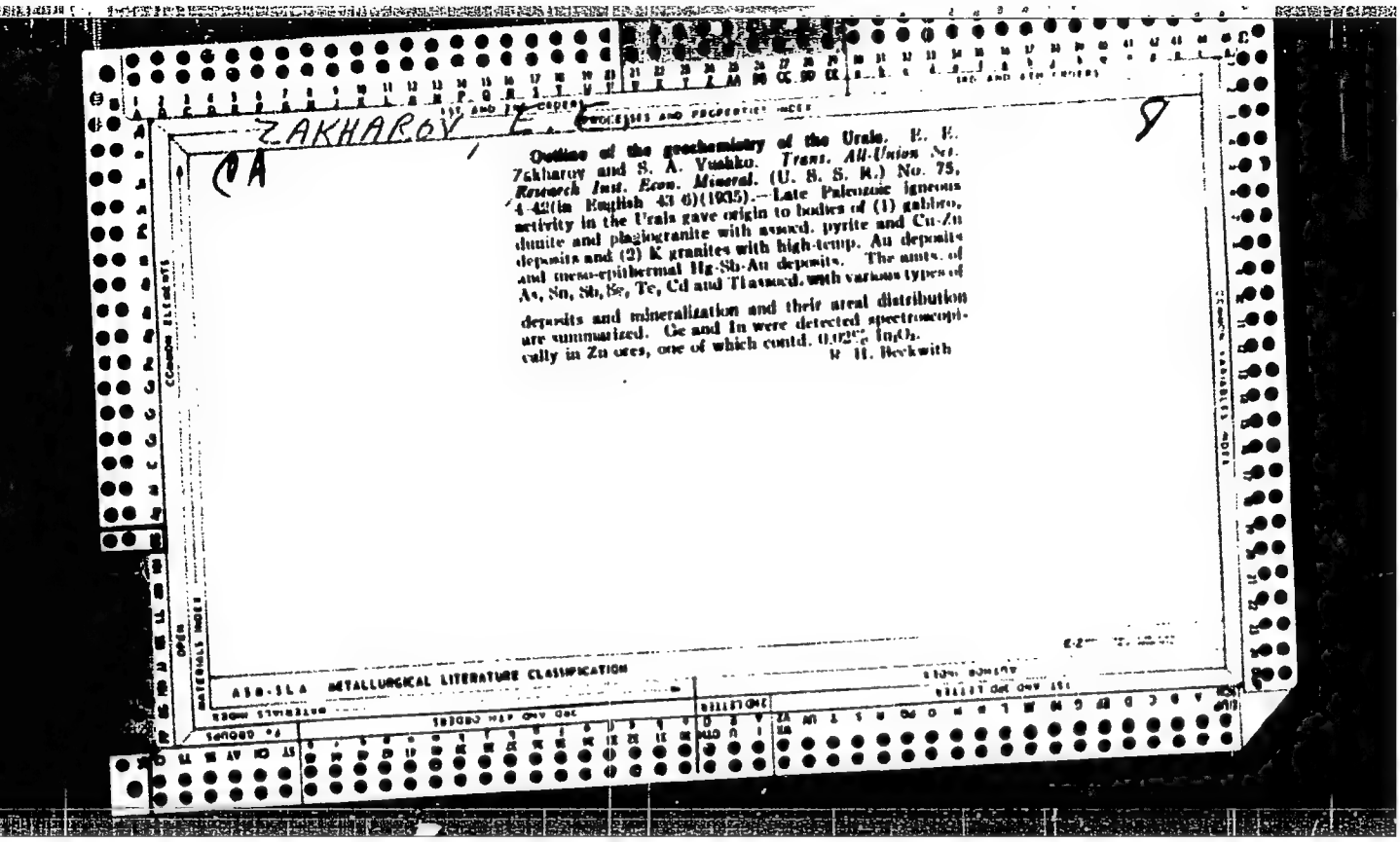
KUZNETSOV, E. A. Petrographical description of the valley of solmonovsk, the mountain Kzrabash Moskva, Izdanie Nauchno - tekhn. up. V. S.N.Kh., 1927. 65 p. (Union of Social Socialiet Republics. Vysshii sovet narodnogo khoziaistva. Nauchno-tekhnicheskoe upravlenie. Trudy, no. 184) Petrograficheskie... 1927.

ZAKHAROV, E. E.

8

**Mineralogy of the Sadon ore vein.** B. E. ZAKHAROV, *Trans. Inst. Econ. Mineral* (Moscow) No. 44, 54–1&2(in English) 133–4(1930).—The Sadon deposit of Pb-Zn ore showed galena, sphalerite, pyrite, chalcopyrite, pyrrhotite, arsenopyrite and molybdenite; of the gang minerals quartz, carbonates, chlorite, muscovite and a mineral of the gumsnite series. A series of the minerals smithsonite, cerussite, malachite, azurite, gypsum and Pb oxide has also been discovered. Z. notes: breccia structures, imbricated and banded structures, a thick network of ore-bearing veinlets, a thick ore-inclusion and structureless formations. H. C. PARHAM

A 1 0 5 1 A METALLURGICAL LITERATURE CLASSIFICATION



ZAKHAROV, E. E.

CA

**Outline of the geochemistry of the Urals.** E. E. Zakharov and S. A. Yushko. *Trans. All-Union Sci. Research Inst. Econ. Mineral.* (U. S. S. R.) No. 75, 4–42 (in English 43–6)(1935).—Late Paleozoic igneous activity in the Urals gave origin to bodies of (1) gabbro, dunite and plagiogranite with assocd. pyrite and Cu-Zn deposits and (2) K granites with high-temp. Au deposits and meso-epithermal Hg-Sb-Au deposits. The mins. of As, Sn, Sb, Se, Te, Cd and Tl assocd. with various types of deposits and mineralization and their areal distribution are summarized. Ge and In were detected spectroscopically in Zn ores, one of which contd. 0.02% InO. R. H. Beckwith

8

ZAKHAROV, Evgeniĭ Evgen'evich

The Karpushinskii copper and zinc deposits in the Central Urals. Moskva, Izd-vo Akademii nauk SSSR, 1936. 110 p. (49-43264)

TN446.R9Z3

ZAKHAROV, E. E.

62

The problem of classification of deposits of mineral resources. E. E. Zakharov. *Izvest. Akad. Nauk S.S.S.R., Ser. Geol.* 1953, No. 3, 70-81.—A consideration of a new modification of the genetic classification of deposits of metallic and nonmetallic mineral resources. The classification is constructed by combination of the predominant genetic characteristics. 21 references. Gladys S. Macy

ZAKHAROV, Ye.Ye.

Department of mineral resources prospecting. Trudy MGRI no.26: 25-31 '54. (MLRA 8:12)
(Mines and mineral resouces--Study and teaching)

Mos. Geological Prospecting
Inst im S. Ordzhonikidze

ZAKHAROV, Ye.Ye.

Contribution to the classification of silver, lead, and zinc ore deposits. Trudy MGRI no.28:70-91 '55. (MLRA 8:6)
(Ore deposits)

ZAKHAROV, Ye. Ye.

3(5) p3

PHASE I BOOK EXPLOITATION SOV/1923

Akademiya nauk SSSR. Otdeleniye geologo-geograficheskikh nauk. Komissiya po probleme "Zakonomernosti razmeshcheniya poleznykh iskopayemykh."

Zakonomernosti razmeshcheniya poleznykh iskopayemykh (Regularities in the Distribution of Mineral Deposits Vol 1. Moscow, Izd-vo AN SSSR, 1958. 532 p. Errata slip inserted. 2,500 copies printed.

Resp. Ed.: N.S. Shatskiy, Academician; Editorial Board: N.S. Shatskiy, Academician, D.I. Shcherbakov, Academician, N.A. Belyayevskiy, N.N. Dolgopolov, O.D. Levitskiy, Yu.M. Pushcharovskiy, G.A. Sokolov; Ed. of Publishing House: G.I. Nosov; Tech. Ed.: I.N. Guseva

PURPOSE: This book is intended for geologists and petrographers, particularly those interested in the worldwide distribution of minerals and the reasons underlying their occurrence.

Card 1/6

Mineral Deposits (Cont.)

COVERAGE: On the basis of particular regional studies this book attempts to establish the rules governing the distribution of metallic and non-metallic ore deposits. The work includes articles on the metallogeny of individual minerals, on broad methodological problems, and on the possibility of predicting the occurrence of a mineral in the USSR on the basis of its occurrence throughout the world. Six maps depicting the distribution of a particular mineral throughout the world are included with the work. References accompany each article.

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SOV/1923

Mineral Deposits (Cont.)



Card 3/6

Mineral Deposits (Cont.)









APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001963610005-0"

ZAKHAROV, Ye.Ye.

Distribution of ferrous and nonferrous metal deposits as revealed by areal geology. Zakonom. razm. polezn. iskop. 1:92-122 '58. (MIRA 12:3)

1.Moskovskiy geologo-razvedochnyy institut im. Ordzhonikidze.
(Ore deposits)

ZAKHAROV, Ye. Ye.

AUTHOR: Pushcharovskiy, Yu.M. 11-58-7-12/12

TITLE: The Activity of the Interdepartmental Commission on the Problem of "Regularities of Occurrence of Mineral Deposits" in 1957 (Deyatel'nost' mezhduvedomstvennoy Komissii po probleme "Zakonomernost' razmeshcheniya poleznykh iskopayemykh" v 1957 g.)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geologicheskaya, 1958, Nr 7, pp 117-120 (USSR)

ABSTRACT: The organization of an interdepartmental commission for the study of the regularities of occurrence of mineral deposits was suggested by Academician N.S. Shatskiy in 1953, and was created in 1955 by the Presidium of the Academy of Sciences of the USSR. For example, general metallogenic problems, as well as questions of occurrence of important minerals were studied by the commission in the eastern part of the USSR. General metallogenic problems were reported by Ye.Ye. Zakharov of the Moscow Geologic Research Institute). He demonstrated metallogenic maps of the world on which were shown occurrences of ore formations of iron, manganese, chromium, silver, lead, zinc, tin and copper on the background of the largest tectonic elements of the earth, isolated in function of the age of the folding. These maps helped to indicate some general regulari-

Card 1/6

ZAKHAROV, Ye.Ye.

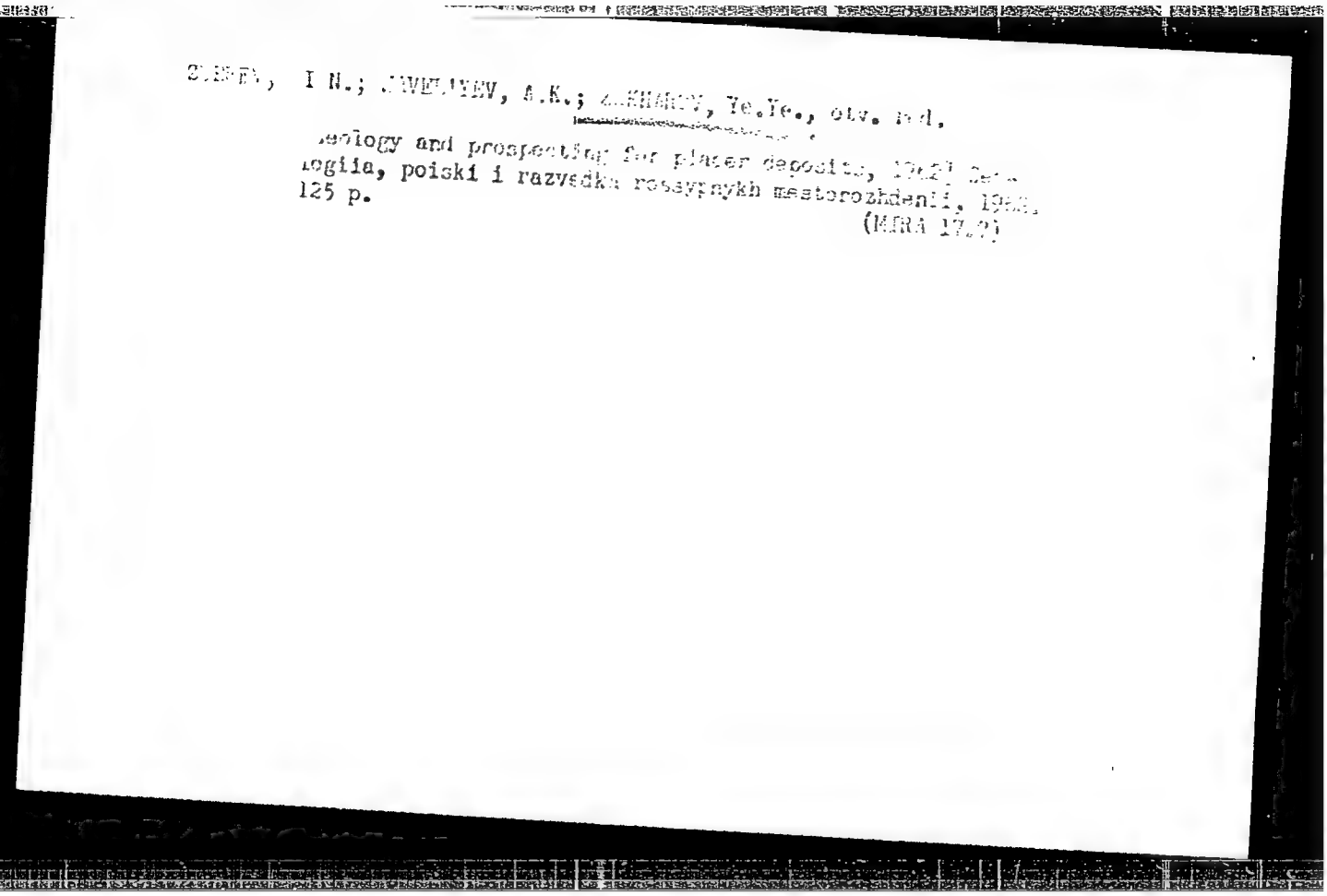
Practice of metallogenic zonation of Europe. Zakonom. razm. polezn. iskop. 2:5-24 '59. (MIRA 15:4)

1. Moskovskiy geologo-razvedochnyy institut imeni Ordzhonikidze.
(Europe--Ore deposits)

ZAKHAROV, Ye.Ye.

Metallogeny of the Kara-Tau. Zakon.razm.polezn.iskop. 3:38[illegible]
417 '60. (MIRA 14:11)

1. Moskovskiy geologo-razvedochnyy institut imeni S.Ordzhonikidze.
(Kara-Tau—Ore deposits)



[redacted], I N.; [redacted], A.K.; [redacted], Ye.Ye., otv. red.

Geology and prospecting for placer deposits, 1962. [redacted]
logiia, poiski i razvedka rossypnykh mestorozhdenii, 1962.
125 p.
(MIRA 17:2)

ZAKHAROV, Ye.Ye.

M.V.Lomonosov's great contribution to the study of ore deposits. Izv.vys.ucheb.zav.; geol.i razv. 5 no.2:3-8 F '62. (MIRA 15:3)

1. Moskovskiy geologorazvedochnyy institut imeni S.Ordzhonikidze.
(Lomonosov, Mikhail Vasil'evich, 1711-1765)
(Ore deposits)

VAKHROMEYEV, Sergey Andreyevich; ZAKHAROV, Ye.Ye., red.; VOL'FSON, F.I., red. BEREZOVSKAYA, L.I., red. izd-va; MAKEYEV, V.I., red. izd-va; IVANOVA, A.G., tekhn. red.

[Mineral resources, their classification and formation] Mestorozhdeniia polezn'ykh iskopaemykh, ikh klassifikatsiia i usloviia obrazovaniia. Pod red. E.E.Zakharova i F.I.Vol'vsona. Moskva, Gos.nauchno-tekhn. izd-vo lit-ry po gel. i okhrane nedr, 1961. 462 p. (MIRA 14:7)
(Mines and mineral resources)

SMIRNOV, V.I., glav. red.; ZAKHAROV, Ye.Ye., red.; MAGAK'YAN, I.G., red.; SOKOLOV, G.A., red.; YAKOVLEV, G.F., red.

[Problems of ore genesis] Problemy genezisa rud. Moskva, Nedra, 1964. 384 p. (Its Doklady sovetskikh geologov, Problema 5)
(MIRA 17:8)

1. International Geological Congress. 22d, 1964.
New Delhi

MEDVEDEVA, I.Ye.; PETROV, V.P.; KABANOVA, Ye.S.; MARFUNIN, A.S.; TSVETKOV, A.I.; PILOYAN, G.O.; MARFUNIN, A.S., doktor geol.-miner.nauk, otv. red.; ZAKHAROV, Ye.Ye., prof., glav. red.

[Achievements of science: Geochemistry, mineralogy, petrography, 1963-1964] Itogi nauki: geokhimiia, mineralogiia, petrografiia, 1963-1964. Moskva, Akad. nauk SSSR. In-t nauchnoi informatsii, 1965. 235 p. (MIRA 19:2)

ACC NR: AN7005950 SOURCE CODE: UR/9012/67/000/052/0004/0004

AUTHOR: Zakharov, Yu.

ORG: none

TITLE: New fishing ship

SOURCE: Pravda, no. 52, 21 Feb 67, p. 4, cols. 5-7

TOPIC TAGS: fishing ship, ship

ABSTRACT: The fishing ship "Vostok" is being built by Chief Designer A. A. Andreyuk. It will be 225 meters long, 28 meters wide, and 28 meters high. Its cruising speed will be 18.5 knots and it will have 14 seiners. It will be able to stay at sea 125 days and will carry about 600 people. It will have a 26,000 hp twin propeller steam turbine installation. [NC]

SUB CODE: 13 SUBM DATE: none/ ATD PRESS: 5115

Card 1/1 UDC: none

SAKHAROV, Ye.; ZAKHAROV, Yu.

The training of personnel ensures success. Fin.SSSR 20 no.2: 46-48 F '59. (MIRA 12:4)

1. Zamestitel' ministra finansov Ukrainskoy SSR (for Sakharov).
2. Starshiy inspektor upravleniya kadrov i uchebnykh zavedeniy Ministerstva finansov SSSR (for Zakharov).
(Ukraine--Finance)

VAYSBURD, D.; ZAKHAROV, Yu.

Conference on the problem "Changes in the properties of materials caused by irradiation." Atom. energ. 13 no.5:497-498 N '62. (MIRA 15:11)
(Materials, Effect of radiation on)

ZAKHAROV, Yu.

Formless winding of coils. Radio no.7:63 Jl '56. (MLRA 9:9)
(Electric coils)

ZAKHAROV, Yu.A., mayor med. sluzhby

Importance of certain neurological symptoms in diagnosis. Voen.-med zhur. no.12:52-55 D '55 (MIRA 12:1)
(NERVOUS SYSTEM--DISEASES)

S/089/62/013/005/012/012
B102/B104

AUTHORS: Vaysburd, D., Zakharov, Yu.

TITLE: Conference on the problem "Izmeneniye svoystv materialov pod deystviyem izlucheniy" ('Radiation-induced changes in material properties")

PERIODICAL: Atomnaya energiya, v. 13, no. 5, 1962, 497-498

TEXT: The conference was held in November 1961 at the Tomskiy politekhnicheskiy institut (Tomsk Polytechnic Institute) (TPI). Studies at this institute, at the Sibirskiy fiziko-tekhnicheskiy institut (Siberian Physicotechnical Institute)(SFTI), and at the Tomskiy gosudarstvennyy universitet (Tomsk State University) (TGU) were reported and discussed. Scientists attended from Moscow, Irkutsk, Novosibirsk, Tashkent and Tbilisi. The main fields covered were: Determination of radiation resistance in dependence on the chemical composition of the material; physics of radiation defects and microprocesses; chemical radiation effects; apparatus for investigating radiation effects. The following scientists gave reports: A. A. Vorob'yev (TPI), radiation effects

Card 1/3

Conference on the problem ...

in ion crystals; A. V. Kuz'mina (TPI), calorimetric determination of energy stored in gamma-irradiated NaCl (1.47 cal/g); P. A. Savintsev, I. T. Berzina, A. A. Botaki, A. F. Naumov (TPI), irradiation-induced changes in physical properties of ion crystals; A. A. Vorob'yev, Ye. K. Zavadovskaya (TPI), radiation resistance of ion crystals as dependent on structure and composition; S. K. Salo (TPI), F-center concentration in X-ray-irradiated alkali halogenides; I. Ya. Melik-Gaykazyan, L. V. Grigoruk, M. I. Ignat'yeva (TPI), X-ray induced F-center formation of alkali halogenides as dependent on the bivalent-metal impurity content; B. V. Budylin and A. A. Vorob'yev (TPI), spontaneous F-center formation in neutron-irradiated and annealed ion crystals; A. K. Berzin, S. L. Kashchuk (TPI), β-radiation attenuation as reduced by small doses of neutron irradiation; M. A. Krivov, S. V. Molyanov, A. P. Vyatkin, V. I. Domnin, S. V. Mal'tsev, B. V. Mashkova (SFTI), effect of X- and γ-rays on semiconductor properties; V. M. Nesterov, Ye. S. Nesmelova, T. Kh. Mikhaylova, N. I. Ol'shanskaya (SFTI), radiation effects on crystalline polymers, rubbers, resin, and PVC plastics; V. V. Vorob'yev (TPI), radiation effects in ion crystals (review); V. V. Boldyrev, A. N. Oblivantsev, effect of previous X-ray irradiation on the thermal

Card 2/3

Conference on the problem ...

disintegration of permanganates; V. V. Boldyrev, Yu. A. Zakharov, V. I. Yeroshkin, effect of impurities on thermo-, photo-, and radiation resistance of ionic salts; L. S. Sokolov (TPI), output and measurement of a cyclotron beam for material irradiation; B. A. Kononov and V. I. Rudenko (TPI), new design of apparatus for measuring the betatron-electron absorption coefficient in crystals; B. A. Kononov, S. A. Kuznetsov, Yu. P. Tsurukin (TPI), measurements of electric conductivity of irradiated samples in vacuo ($10^{-5}$ mm Hg, -150-+150°C).

Card 3/3

ZAKHAROV, Yu., kand. tekhn. nauk

A new river refrigerator ship. Rech. transp. 24 no.5:31-32 '65.
(MIRA 18:9)

VYSOTSKIY, B.P.; KHARYBIN, A.Ye.; ZAKHAROV, Yu.G., kand.tekhn.nauk, red.; KUZNETSOVA, A.G., izdat.red.; ORLOVSHKINA, V.I., tekhn.red.

[Radar installations] Radiolokatsionnye ustroistva. Moskva, Gos.izd-vo obor.promyshl. Pt.1. [Basic questions of design] Osnovnye voprosy proektirovaniia. 1960. 160 p. (MIRA 13:4)
(Radar)

ZAKHAROV, Yu.F., inzhener.

Calculator for measuring cable length in the laying process.
Energetik 5 no.8:31-32 Ag '57. (MLRA 10:10)
(Electric cables)

ZAKHAROV, Yu.A., tekhnik

Regulation of district heating systems. Energetik 10 no.10:16-17 O '62. (MIRA 15:12)
(Heating from central stations)

ZAKHAROV, Yu.A.

State of the blood vessels of the lower extremities impatients with a lumbosacral radiculities syndrome. Sov. med. 24 no. 5:118-121 My '60. (MIRA 13:10)

(LUMBOSACRAL REGION—DISEASES) (NERVES, SPINAL—DISEASES)
(LEG—BLOOD SUPPLY)

ZAKHAROV, Yu.A.

Clinical testing of the new preparation paramyon in diseases of the nervous system. Zhur.nevr.psikh. 55 no.4:291-295 '55. (MLRA 8:7)

1. Voyenno-morskaya meditsinskaya akademiya.
(NERVOUS SYSTEM, diseases,
ther., musc. relaxant paramyon)
(MUSCLE RELAXANTS, therapeutic use,
paramyon in nervous system dis.)

ZAKHAROV, Yu. A.

The significance of Certain Neurological Symptoms for Diagnostic Purposes.

VOYENNO-MEDITSINSKIY ZHURNAL (MILITARY MEDICAL JOURNAL), No 12, 1955. p. 52.

SOV/63-4-2-39/39

5(2)

AUTHORS: Boldyrev, V.V., Zakharov, Yu.A.

TITLE: On the Effect of Admixtures on the Rate of Thermal Decomposition of Silver Oxide

PERIODICAL: Khimicheskaya nauka i promyshlennost', 1959, Vol 4, Nr 2, pp 287-288 (USSR)

ABSTRACT: The kinetics of thermal decomposition was investigated by means of a quartz balance. It has been shown that the decomposition rate of pure silver oxide is increased in the beginning, and takes a gradual course later. The introduction of a cadmium addition first accelerates the decomposition and then reduces it. On the whole, the decomposition is slower than in the pure substance. The introduction of mercury accelerates the decomposition. The additions affect either the lattice or the ionic and electron processes of decomposition. The accelerating influence of mercury is explained by its transition from the bivalent to the monovalent state.
There is 1 graph and 3 Soviet references.

Card 1/2

On the Effect of Admixtures on the Rate of Thermal Decomposition of Silver Oxide SOV/63-4-2-39/39

ASSOCIATION: Tomskiy gosudarstvennyy universitet imeni V.V. Kuybysheva (Tomsk State University imeni V.V. Kuybyshev)

SUBMITTED: December 29, 1958

Card 2/2

USCOMM-DC-61.409

BOLDYREV, V.V.; ZAKHAROV, Yu.A.

Anisotropy of the rate of decomposition of solids. Part 1: Anisotropy of the rate of dehydration of potash alums. Zhur. fiz. khim. 34 no.2:446-451 F '60. (MIRA 14:7)

1. Tomskiy gosudarstvennyy universitet.
(Alum) (Dehydration (Chemistry))

30920

54600

S/195/62/002/003/005/009
E030/E452

AUTHORS: Zakharov, Yu.A., Boldyrev, V.V. and Alekseyenko, A.A.

TITLE: Influence of the addition of cadmium on the velocity of thermal and radiochemical decomposition of silver carbonate

PERIODICAL: Kinetika i kataliz, v.2, no.3, 1961, 365-367

TEXT: The thermal decomposition of silver carbonate, both pure and with addition of 2.5 mole % cadmium carbonate, has been studied at 151° gravimetrically, unirradiated, and also with X-irradiation from apparatus РУП-2 (RUP-2) using 200 kV and $I_a$ of 20 mA. The salts were formed by double decomposition. In the thermal decomposition, the specimens were suspended from a quartz spring balance with a sensitivity of $4 \times 10^{-5}$ g in a chamber thermostatted to ± 0.2°C. In the radiochemical decomposition, the kinetics were measured photometrically by the change in colour of the specimens. The object of the work was to study an example of decomposition of a solid solution where bonds in the anionic or cationic lattice components were broken; most examples hitherto have concerned only rupture of like bonds. The results are shown in the figure where $\alpha$ is the fraction of specimen reacted. It is seen that

Card 1/3 2

Influence of the addition ...

the addition of defects in any way always increases the decomposition rate; this, coupled with the X-ray finding that the addition of $Cd^{++}$ deforms the cation bonds shows that defect formation is responsible for the increased decomposition. This is in contrast to the data on silver oxalate, where decomposition is slowed up by addition of cadmium which hinders only the electronic and ionic transfers leading to decomposition. There are 1 figure, 2 tables and 15 references: 11 Soviet and 4 non-Soviet. The references to English language publications read as follows: Ref.5: L. Suchow, S.Hersh, J.Phys., Chem., v.57, 438, 1953; Ref.7: P. Gray, F.Waddington, Proc. Roy. Soc., A241, 110, 1957; Ref.14: J.Mitchell, Phil. Magazine, v.40, 248, 1949; Ref.15: J.Thomas, F.C.Tompkins, Proc. Roy. Soc., v.209, 550, 1951.

ASSOCIATION: Tomskiy politekhnicheskiy institut im. S.M.Kirova
(Tomsk Polytechnical Institute imeni S.M.Kirov)

SUBMITTED: October 17, 1960

Card 2/3 2

BOLDYREV, V.V.; YEROSHKIN, V.I.; ZAKHAROV, Yu.A.

Effect of cadmium and mercury admixtures on the rate of thermal decomposition of silver oxalate. Izv.vys.ucheb.zav.; khim.i khim tekh. 3 no.1:33-35 '60. (MIRA 13:6)

1. Kafedra neorganicheskoy khimii Tomskogo gosudarstvennogo universiteta imeni V.V. Kuybysheva.
(Silver oxalate)
(Cadmium)
(Mercury)

S/844/62/000/000/120/129
D207/D307

AUTHORS: Boldyrev, V. V., Zakharov, Yu. A., Yeroshkin, V. I. and Tronov, A. B.

TITLE: Effect of preliminary irradiation on the rate of thermal decomposition of silver oxalate and carbonate containing admixtures

SOURCE: Trudy II Vsesoyuznogo soveshchaniya po radiatsionnoy khimii. Ed. by L. S. Polak. Moscow, Izd-vo AN SSSR, 1962, 693-698

TEXT: Pure $Ag_2CO_3$, pure $Ag_2C_2O_4$ and the solid solutions 97.5% $Ag_2C_2O_4$ + 2.5% $CdC_2O_4$, 97.5% $Ag_2CO_3$ + 2.5% $CdCO_3$, 95% $Ag_2C_2O_4$ + 5% $CdC_2O_4$ were subjected to $\gamma$ rays, x rays and uv radiations. A study was made of the effect of the cadmium impurity on (1) thermal decomposition after irradiation of the carbonate and oxalate, and (2) radiolysis of these two compounds. Preliminary irradiation with

Card 1/2

Effect of preliminary ...

$Co^{60}$ $\gamma$ rays (50 c source) or uv radiation from a ПРК-7 (PRK-7) lamp accelerated subsequent thermal decomposition of pure oxalate at 158°C but this radiation effect was reduced on addition of Cd. X rays from a 1 БПМ-200 (1 BPM-200) tube accelerated subsequent thermal decomposition of pure carbonate at 151°C and this acceleration was intensified by adding Cd. Cadmium reduced the photolytic action of $\gamma$ rays and uv in the case of the oxalate but it intensified the x ray photolysis of the carbonate. The opposite effects of cadmium in these two compounds are due to the difference in the mechanism of decomposition: in the oxalate the anion-cation bonds are broken and metallic silver is produced; in the carbonate the internal bonds are severed in the $CO_3$ ion and $Ag_2O$ is formed. Cadmium acts by producing deformations and lattice defects as well as by taking part in electronic and ionic processes of decomposition. There are 3 figures and 5 tables.

ASSOCIATION: Tomskiy politekhnicheskiy institut im. S. M. Kirova (Tomsk Polytechnic Institute im. S. M. Kirov)

BOLDYREV, V.V.; PINAYEVSKAYA, E.N.; BOLDYREVA, A.V.; ZAKHAROV, Yu.A.; KONYSHEV, V.P.

Effect of preliminary irridation and chemical treatment on the thermal decomposition rate of silver permanganate. Kin. i kat.2 no.2:184-187 Mr-Ap '61. (MIRA 14:6)

1. Tomskiy politekhnicheskiy institut imeni S. M. Kirova.
(Silver permanganate)

BOLDYREV, V.V.; PINAYEVSKAYA, E.N.; BOLDYREVA, A.V.; ZAKHAROV, Yu.A.; KONYSHEV, V.P.

Effect of preliminary irradiation and chemical treatment on the thermal decomposition rate of silver permanganate. Kin. i kat. 2 no.2:184-187 Mr-Ap '61. (MIRA 14:6)

1. Tomskiy politekhnicheskiy institut imeni S. M. Kirova.
(Silver permanganate)

ZAKHAROV, Yu.A.; BOLDYREV, V.V.; LYKHIN, V.M.; VOTINOVA, L.A.; SAVEL'YEV, G.G.; BREGER, A.Kh.

Study of the effect of preliminary irradiation on the thermal degradation of silver oxalate containing cadmium admixture. Dokl.AN SSSR 145 no.1:122-124 Jl '62. (MIRA 15:7)

1. Nauchno-issledovatel'skiy institut yadernoy fiziki, elektroniki i avtomatiki pri Tomskom politekhnicheskom institute imeni S.M.Kirova i Fiziko-khimicheskiy institut imeni L.Ya.Karpova. Predstavleno akademikom M.M.Dubininym.

(Silver oxalate) (Cadmium) (Radiation)

BOLDYREV, V.V.; ZAKHAROV, Yu.A.; LYKHIN, V.M.; VOTINOVA, L.A.

Effect of the addition of cadmium ions on the thermal stability of silver oxalate. Kin.i kat. 4 no.5:672-682 S-O '63. (MIRA 16:12)

1. Nauchno-issledovatel'skiy institut yadernoy fiziki, elektroniki i avtomatiki pri Tomskom politekhnicheskom institute imeni Kirova.

L 2h454-65 EWT(1)/EPA(s)-2/EEC(t)/EEC(b)-2 Pt-10 IJP(c) GG

ACCESSION NR: AP5002575 S/0076/64/038/012/2882/2888

AUTHOR: Zakharov, Yu. A.; Kabanov, A.A.

TITLE: The effect of admixtures of plumbous and carbonate ions on the conductivity, permittivity and dielectric loss angle of silver azide

SOURCE: Zhurnal fizicheskoy khimii, v. 38, no. 12, 1964, 2882-2888

TOPIC TAGS: silver azide, plumbous ion, carbonate ion, electrical conductivity, permittivity, dielectric loss angle, photochemical stability, photography

ABSTRACT: The effect of additions of $Pb^{2+}$ and $CO_3^{2-}$ ions on the conductivity, permittivity and dielectric loss angle of silver azide was studied experimentally in order to prove the theory proposed by Zakharov et al. for the change in photochemical stability observed on cocrystallization of silver azide with $Ag_2CO_3$ (Kinetika i kataliz v. 5, 6, 1964). Specimens containing 0.2-6 mol. % $Pb^{2+}$ or 0.1-5 mol. % $CO_3^{2-}$ were prepared. The addition of $CO_3^{2-}$ ions increased the conductivity by up to 30%, with saturation of the effect reached at a concentration of about 1 mol. %; with increasing concentrations of $Pb^{2+}$ the conductivity decreased, and the conductivity isotherms went through a minimum at about 1.5 mol. % $Pb^{2+}$. The dielectric constant and loss angle, measured with an illustrated apparatus de-

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L 24454-65

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signed for explosive compounds, increased linearly with the concentration of $CO_3^{2-}$ and passed through a minimum at approximately 0.8 mol.% $Pb^{2+}$. The experimental results indicate that solid substitution solutions with ionic conductivity are formed in the systems $AgN_3$-$PbN_6$ and $AgN_3$-$Ag_2CO_3$, in agreement with the proposed mechanism. Introduction of $CO_3^{2-}$ or $Pb^{2+}$ is shown to cause an increase or decrease in the number of interstitial Ag cations, respectively, and to promote or retard, respectively, the photochemical decomposition of silver azide. "The authors thank V. P. Zaytsev for his help with the measurements." Orig. art. has: 6 figures and 5 formulas.

ASSOCIATION: Tomskiy politekhnicheskiy institut im. S. M. Kirova (Tomsk polytechnical institute)

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Card 2/2

SAVEL'YEV, G.G.; ZAKHAROV, Yu.A.

Changes in the physicochemical properties of solids produced by additives. Part 2: Effect of semiconducting contacts on the thermal stability of silver oxalate. Izv. vys. ucheb. zav.; khim. i khim. tekh. 7 no.5:768-773 '64 (MIRA 18:1)

1. Kafedra radiatsionnoy khimii Tomskogo politekhnicheskogo instituta imeni S.M. Kirova.

ZAKHAROV, Yu.A.; SAVEL'YEV, G.G.; BOLDYREV, V.V.; VOTINOVA, L.A.

Changes in the physicochemical properties of solids under the effect of additions. Part 3: Some properties of silver azide containing $Pb^{++}$ and $CO_3^{--}$ additions. Kin. i kat. 5 no.5: 807-814 S-O '64. (MIRA 17:12)

1. Tomskiy politekhnicheskiy institut imeni Kirova.

ZAKHAROV, Yu.A.; SAVEL'YEV, G.G.

Thermal decomposition of silver sulfite containing $Pb^{++}$ and $VO_3^-$ admixtures. Kin. i kat. 5 no.2:345-347 Mr-Ap '64. (MIRA 17:8)

1. Tomskiy politekhnicheskiy institut imeni Korova.

ZAKHAROV, Yu.A.; KABANOV, A.A. (Tomsk)

Change in the conductivity, dielectric constant and losses in silver azide by $Pb^{2+}$ and $CO_3^{2-}$ admixtures. Zhur. fiz. khim. 38 no.12:2882-2888 D '64. (MIRA 18:2)

1. Tomskiy politekhnicheskiy institut imeni S.M. Kirova.

SAVEL'YEV, G.G.; ZAKHAROV, Yu.A.; SPITSA, V.B.

Effect of the electric field on the rate of thermal decomposition of silver oxalate and azide. Zhur.fiz.khim. 39 no.11:2808-2810 N '65. (MIRA 18:12)

1. Tomskiy politekhnicheskiy institut imeni S.M.Kirova.

ZAKHAROV, Yu.A.; KABANOV, A.A.; TRUBITSYN, A.M.

Effect of a fixed electric field on the thermal decomposition of silver oxalate. Izv.vys.uchab.zav.; khim.i khim.tekh. 8 no.4:529-532 '65. (MIRA 18:11)

1. Tomskiy politekhnicheskiy institut imeni Kirova, kafedra radiatsionnoy khimii.

ZAKHAROV, Yu.A.; SAVEL'YEV, G.G.

Effect of admixtures on certain physicochemical properties of silver oxalate. Part 5: Photolysis, radiolysis, and thermal decomposition of silver oxalate. Kin. i kat. 6 no.4:611-618 Jl-Ag '65. (MIRA 18:9)

1. Tomskiy politekhnicheskiy institut imeni S.M.Kirova.

ZAKHAROV, Yu.A.; SAVEL'YEV, G.G.; ZHURAVLEV, V.K.; BOLDYREV, V.V.

Changes in the physicochemical properties of solids in the presence of admixtures. Part 4: Thermal decomposition of silver oxalate. Kin. i kat. 6 no.3:415-423 My-Je '65. (MIRA 18:10)

1. Tomskiy politekhnicheskiy institut imeni Kirova.

L 44213-66 EES-2 /EWT(1)/EWT(m) JD

ACC NR: AR6025369 SOURCE CODE: UR/0285/66/000/004/0022/0022

AUTHOR: Averkiyev, S. M.; Dorofeyev, V. M.; Zakharov, Yu. A. 14

B

ORG: none

TITLE: A brake for testing axial microturbines

SOURCE: Ref. zh. Turbostroyeniye, Abs. 4.49.137

REF SOURCE: Tr. Kuybyshevsk. aviats. in-t, vyp. 22, 1965, 15-21

TOPIC TAGS: microturbine, axial microturbine, brake, test brake/UIMT-6 brake

ABSTRACT: A study has been made of the design, characteristics, and operational features of the UIMT-6 brake manufactured by the Thermodynamic Laboratory of the Kuybyshev Aviation Institute for Research on Microturbines and their Components. [Translation] [FM]

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Card 1/1 mT

L 30996-66 EWT(m)/EWP(j)/T WW/JW/JWD/RM

ACC NR: AP6007774 SOURCE CODE: UR/0195/66/007/001/0055/0061

AUTHOR: Zakharov, Yu. A.; Savel'yev, G. G.

ORG: Tomsk Polytechnic Institute im. S. M. Kirov (Tomskiy politekhnicheskiy institut)

TITLE: Changing the physicochemical properties of solids by means of admixtures. Part 6. Role of contact phenomena in the catalysis of thermal decomposition of solids by semiconductor admixtures

SOURCE: Kinetika i kataliz, v. 7, no. 1, 1966, 55-61

TOPIC TAGS: semiconducting admixture, electron work function, solid state reaction, silver azide, thermal decomposition, lead azide, potassium perchlorate, ammonium perchlorate

ABSTRACT: The effect of heterophase semiconductor impurities having donor-acceptor properties (NiO, $Cu_2O$, ZnO, CdO, $Bi_2S_3$, $Co_2O_3$, $Fe_2O_3$, $Ag_2S$) on the rate of thermal decomposition of ionic salts ($PbN_6$, $KClO_4$, $NH_4ClO_4$, $Ag_2C_2O_4$ and $AgN_3$) was studied. The heterophase catalysis of solid state reactions is treated in relation to the contact phenomena at the boundary between the catalyst and the reacting solid. The ef-

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